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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,153	08/25/2000	Jun Koyama	0756-2204	6963

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EXAMINER

CHOW, DOON Y

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 02/24/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/648,153

Applicant(s)

KOYAMA, JUN

Examiner

Dennis-Doon Chow

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 17-27 and 29-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-14, 17-27, 29 and 47-50 is/are allowed.
- 6) ☒ Claim(s) 1-5, 30-46 and 51-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks (4571225) in view of Johary et al. (5196839).

Parks discloses a liquid crystal display device comprising a first and second substrates, a liquid crystal disposed between the first and second substrates; at least one memory circuit connecting to a thin film transitory and a pixel electrode; wherein the memory circuit have a first and second invertors (col. 6, line 53-56) which includes a first and second thin film transistors.

Parks does not explicitly disclose generating gradation signals include different voltages, which can be applied to the pixels.

Johary discloses a display device for generating time gradation signals or digital gradation signals)Fig. 1) which include different voltages.

Therefore, it would have been obvious to one of ordinary skill in the art to use Johary's generating means in the Parks' invention to provide visual differentiation for

displayed images (see col. 1, lines 28-32 of Johary). By doing so, gradation images can be generated in Parks' display device.

3. Claims 30-46 and 51-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks in view of Runaldue et al. (5325338).

Parks discloses a liquid crystal display device comprising a first and second substrates, a liquid crystal disposed between the first and second substrates; at least one memory circuit connecting to a thin film transitory and a pixel electrode; wherein the memory circuit have a first and second invertors (col. 6, line 53-56) which includes a first and second thin film transistors.

Parks does not disclose the memory circuit having an N-channel TFT and an P-channel TFT.

Runaldue disclose a conventional memory cell have an N-channel TFT and an P-channel TFT (Fig. 3).

Therefore, It would have been obvious to one of ordinary skill in the art to substitute Runaldue's memory cell for Parks' memory circuit. This would have been obvious because both Runaldue's and Parks' memories provide the same storing function.

Allowable Subject Matter

4. Claims 6-14, 17-27, 29, 47-50 are allowable.

Response to Arguments

5. Applicant's arguments filed 11/18/2002 have been fully considered but they are not persuasive.

Applicant's arguments with regarding to the 112 rejection of the claimed AC limitation are persuasive. Therefore, the 112 rejection is hereby withdrawn.

Liquid crystal display devices are typically driven by AC or DC signals. It is known to use AC signals in a liquid crystal display device such as Parks' display device.

Applicant argues that there is no suggestion or motivation to combine Parks and Johary. The examiner disagrees. Johary teaches that Flat panel display devices are typically monochrome devices (see col. 1, lines 26-27). In order to provide visual differentiation for displayed images so that the displayed images are most interest to be looked at, a gray scale device is used (see col. 1, lines 28-32). With these teachings, it would have been obvious to one of ordinary in the art to combine Parks and Johary.

Applicant argues that the use of Parks' memory cell is different from the Runaldue's memory cell. Applicant then concludes that examiner's rejection is impermissible hindsight reconstructing of applicant's invention.

Examiner disagrees with applicant's arguments because the use of Parks' memory cell and Runaldue's memory cell are clearly the same. Both Parks' and Runaldue's memory cells are used to store data information.

As to applicant's arguments with regarding to the combination of the Parks and Runaldue references, it is not necessary that the references actually suggest, expressly or in so many words, the changes or improvements that applicant has made. The test

for combining references is what the references as a whole would have suggested to one of ordinary skill in the art. In re Shecker, 168 USPQ 716 (CCPA 1971).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis-Doon Chow whose telephone number is 703-305-4398. The examiner can normally be reached on 8:30-6:00, Alternate Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras can be reached on 703-305-9720. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

D. Chow
February 21, 2003


DENNIS-DOON CHOW
PRIMARY EXAMINER